



tesa AG 698-WCG/HCL
101769-42
6713-St-bb

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANTS : PFAFF et al.
SERIAL NO. : 09/720,947
FILED : 3 January 2001
FOR : ELECTRICALLY CONDUCTIVE THERMOPLASTIC HEAT-ACTIVATED
ADHESIVE FILM
ART UNIT : 1771
EXAMINER : Daniel Zirker

23 September 2004

Mail Stop: Appeal Brief - Patents
Hon. Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' BRIEF ON APPEAL PURSUANT TO 37 CFR § 1.192

SIR:

This is an appeal from the final rejection dated 13 November 2003.

(1) REAL PARTY IN INTEREST

The real party in interest is **tesa AG** by virtue of an assignment recorded on at Reel 012590,
Frame 0880 (Recorded on 1 February 2002).

(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

(3) STATUS OF CLAIMS/PROSECUTION HISTORY

Claims 9-15 and 17-20 stand finally rejected.

Appellants' also note that an Appeal Brief was previously filed by the appellants on 18 December 2002 and that the prosecution was reopened by the Examiner without any indication of approval from the supervisory patent examiner (see MPEP 1208.02 and Paper No. 18). The chart below summarizes the prosecution history of this application:

Paper No.	Date	Action
6	27 June 2002	First office action on the merits included rejection based on EP 0 846 743 in view of EP 0 140 619
10	16 August 2002	Final Rejection rejection based on EP 0 846 743 in view of EP 0 140 619 withdrawn
14	18 October 2002	Advisory Action
		Appeal Brief filed
18	4 March 2003	Non-final rejection rejection based on EP 0 846 743 in view of EP 0 140 619 reinserted
21	13 November 2003	Final rejection

It is further noted that this application was filed on 3 January 2001 and given the 14-4-4-4 rule and 3-year prosecution rule, this application is currently accruing Patent Term Adjustment time which is extending the patent term beyond the 20-year anniversary of the date of filing for any claim held to be allowable.

Given the extended prosecution history for this application, the appellants request that if prosecution on the merits is again re-opened that the Examiner's supervisory patent examiner approves the re-opening as per MPEP 1208.02.

(4) STATUS OF AMENDMENTS

All amendments have been entered. (There were no amendments made after final rejection)

(5) SUMMARY OF INVENTION

The present invention relates to electrically conductive, thermoplastic and heat-activatable adhesive film, comprising: i) a thermoplastic polymer in a proportion of from 30 to 89.9% by weight, ii)a) one or more tackifying resins in a proportion of from 5 to 50% by weight or ii)b) epoxy resins with

hardeners, with or without accelerators, in a proportion of from 5 to 40% by weight, or c) both said one or more tackifying resins in a proportion of from 5 to 50% by weight and said epoxy resins with hardeners, with or without accelerators, in a proportion of from 5 to 40% by weight, and iii) silver-coated glass beads in a proportion of from 0.1 to 40% by weight, iv) where the diameter of the glass beads is at least equal to the thickness of the adhesive film (which is exemplified by claim 1 and finds support, e.g., by original claim 1 and page 4, lines 27-30 of the specification) and a method for implanting electrical modules in a card body provided with a cutout for accommodating an electronic module which on a first side has a plurality of contact surfaces and on a second side, which is opposite the first side, has an IC chip whose terminals are connected via electrical conductors to the contact surfaces, wherein an electrically conductive, thermoplastic and heat-activatable adhesive film (which is exemplified by claim 10 and finds support, e.g., by original claim 9).

(6) ISSUE

Whether claims 9-15 and 17-20 are unpatentable under 35 U.S.C. § 103(a) over Engeldinger et al. (EP 0 846 743 A1 - "Engeldinger") in view of Reylek et al. (EP 0 134 623 - "Reylek").

(7) GROUPING OF CLAIMS

Claims 9-15 and 17-20 stand or fall together on the basis of claim 9.

(8) ARGUMENT

Summary of Arguments Presented

- (1) No Indication Why Appellants' Previous Response Is No Longer Relevant Against Identical Claims
- (2) Examiner's Own Actions Suggest That the Claims Are Unobvious
- (3) No Factual Support for the Examiner's Position to Combine Engeldinger with Reylek
- (4) Even if "Picking and Choosing" Was Acceptable to Establish a Prima Facie Holding of Obviousness, Combination of Engeldinger and Reylek Does Not Teach Appellants' Claimed Invention

No Indication Why Appellants' Previous Response Is No Longer Relevant Against Identical Claims

The rejection of Engeldinger in view of Reylek was first introduced by the Examiner in Paper No. 6 (mailed on 27 March 2002) and is substantially similar to the rejection currently of record. Then as now, the Examiner acknowledged that the difference between the teachings of Engeldinger and the appellants' claimed invention is that Engeldinger fails to teach silver coated glass beads being present in the disclosed adhesive composition.

The appellants then responded in the amendment of 26 July 2002 that "The '623 (Reylek) reference teaches that the spherical particles used therein should be readily deformable to the thickness of the adhesive between the particles. Glass beads are not deformable, however. The '623 reference could not therefore lead to Applicants' electrically conductive, thermoplastic and heat activatable adhesive film." (see page 6, third paragraph of amendment) In addition, this amendment also introduced the limitation: "iv) where the diameter of the glass beads is at least equal to the thickness of the adhesive film." into claim 9 which is part of the text of claim 9 currently under Appeal.

The next office action by the Examiner was a final rejection (Paper No. 10, mailed on 16 August 2002) which rescinded the Engeldinger in view of Reylek rejection.

After the appellants had filed an Appeal Brief to address the remaining rejections of record (filed on 18 December 2002), the Examiner reopened prosecution on the merits to reinsert the Engeldinger in view of Reylek rejection. However, the Examiner's reinsertion of the rejection did not appear to take into account the limitation that was introduced by the appellants' amendment of 26 July 2002 and also appeared to be based on reasons set forth in another rejection (i.e. Engeldinger '743 in view of Tsukagoshi EP 0 140 619) which has since been rescinded.

Examiner's Own Actions Suggest That the Claims Are Unobvious

MPEP 2142 states in part:

"The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness [page 2100-123]...The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The legal standard of "a preponderance of evidence" requires the evidence to be more convincing than the evidence which is offered in opposition to it.

With regard to the rejections under 35 U.S.C. 103, the examiner must provide evidence

which as a whole shows that the legal determination sought to be proved (i.e. the reference teachings establish a *prima facie* case of obviousness) is more probable than not.”

The fact that the Examiner of record rejected the appellants' claims based on Engeldinger in view of Reylek, withdrew the rejection and then reapplied the rejection would appear to be *prima facie* evidence that even the Examiner is uncertain whether the preponderance of evidence standard has been met which would appear to create a higher burden for the factual support necessary to sustain a holding of *prima facie* obviousness.

No Factual Support for the Examiner's Position to Combine Engeldinger with Reylek

It is well known that the ultimate determination whether an invention would have been obvious under 35 U.S.C. § 103 is a legal conclusion based on underlying findings of fact. see *In re Kotzab*, 217 F.3d 1365, 1369, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000). However, there has been no factual support for the Examiner's positions.

The Examiner's explanation of his rejection based on Engeldinger in view of Reylek is reproduced in part below (see pages 4-5 of Paper No.18):

“...Upon reconsideration, this grounds of rejection has been reinserted since the Examiner **believes** that the combination clearly renders obvious the claimed genus of adhesive films and accompanying methods. In particular, the method of implanting electrical modules in a card body as set forth in claim 15 is **believed** clearly disclosed by the relied upon prior art combination. Applicants have argued earlier in their response of July 26, 2002, Paper No. 9 that the secondary -623 reference ‘teaches that the spherical particles used therein should be readily deformable to the thickness of the adhesive between the particles. Glass beads are not deformable, however.’ However, this particular grounds of rejection is, upon reconsideration, again traversed due to the reasons set forth above [The fact that the particles may be deformed (an alleged flaw which applicants have strenuously argued) is not **believed** to be pertinent since the particles are not required to be spherical in nature, and there are also no restrictions on what the diameter of the particles versus the diameter of the glass core is.]. In summary, applicants have failed to rebut the prima facie case of record.”

As can be seen from the text of the rejection, the Examiner relies on conclusory statements which

are unsupported by fact and, contrary to Examiner's assertions, a *prima facie* holding of obviousness has not been established which requires a rebuttal.

Even if "Picking and Choosing" Was Acceptable to Establish a Prima Facie Holding of Obviousness, Combination of Engeldinger and Reylek Does Not Teach Appellants' Claimed Invention

It is well known that determination of obviousness requires "as a whole" consideration of the applicants claimed invention and that of the prior art and that merely finding elements of the applicants invention is insufficient to establish a *prima facie* holding of obviousness ("As this court has stated, 'virtually all [inventions] are combinations of old elements...Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat patentability of the claimed invention. Such an approach would be 'an illogical and inappropriate process by which to determine patentability.' *Sensotronics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996)." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998)).

However, even if one of ordinary skill in the art were permitted to select elements of the prior art as need to the exclusion of considering the teaching of the reference as a whole, the appellants fail to see how the combination of Engledinger and Reylek renders the appellants' claimed invention to be obvious. It is well known that to establish a *prima facie* holding of obviousness, all claim limitations must be taught. see *MPEP 2143.03*

Illustrative to the teaching of Reylek is page 4, lines 3-12 which reads:

"According to the invention, there is provided anisotropic-electroconductive adhesive film comprising an adhesive component and electroconductive particles, characterized in that the adhesive component contains 0.1 to 10% by volume of electroconductive particles having an average particle size of 1 to 50 μm with a ratio of the minimum diameter to the maximum diameter of each particle being 0.5 to 1.0, and ***the thickness of an adhesive layer is at least 110% of the average particle size of the electroconductive particles*** is not more than 100 μm ."

Therefore, the thickness of the adhesive layer in Reylek is always greater than the diameter of the electroconductive particles unlike the appellants' invention where the diameter of the silver coated glass beads is greater than or equal to the thickness of the adhesive film. Therefore, combining the teaching of Reylek with Engeldinger does not result in the appellants' claimed invention.

(9) CONCLUSION

For the foregoing reasons, Appellants respectfully request that the Honorable Board reverse the final rejections.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Appellants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess to our Deposit Account No. 14-1263.

Respectfully submitted,
NORRIS MCLAUGHLIN & MARCUS, P.A.

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Date: **23 September 2004**

By *Agata Glinska*
Agata Glinska

(10) APPENDIX - CLAIMS ON APPEAL

9. Electrically conductive, thermoplastic and heat-activatable adhesive film, comprising
- i) a thermoplastic polymer in a proportion of from 30 to 89.9% by weight,
 - ii)
 - a) one or more tackifying resins in a proportion of from 5 to 50% by weight or
 - b) epoxy resins with hardeners, with or without accelerators, in a proportion of from 5 to 40% by weight, or
 - c) both said one or more tackifying resins in a proportion of from 5 to 50% by weight and said epoxy resins with hardeners, with or without accelerators, in a proportion of from 5 to 40% by weight,
- and
- iii) silver-coated glass beads in a proportion of from 0.1 to 40% by weight,
 - iv) where the diameter of the glass beads is at least equal to the thickness of the adhesive film.
10. Adhesive film according to Claim 9, wherein the thermoplastic polymer comprises a member selected from the group consisting of thermoplastic polyolefins, polyesters, polyurethanes or polyamides and modified rubbers.
11. Adhesive film according to Claim 9, wherein the adhesive film is blended with one or more additives.
12. Thermoplastic adhesive film according to Claim 9, wherein the adhesive film has a thickness of from 20 to 500 μm .

13. Thermoplastic adhesive film according to Claim 9, wherein the adhesive film is hot pressable at temperatures below 120°C.
14. Thermoplastic adhesive film comprising
- i) a thermoplastic polymer in a proportion of from 30 to 89.9% by weight,
 - ii)
 - a) one or more tackifying resins in a proportion of from 5 to 50% by weight or
 - b) epoxy resins with hardeners, with or without accelerators, in a proportion of from 5 to 40% by weight, or
 - c) both said one or more tackifying resins in a proportion of from 5 to 50% by weight and said epoxy resins with hardeners, with or without accelerators, in a proportion of from 5 to 40% by weight,
- and
- iii) silver-coated glass beads in a proportion of from 0.1 to 40% by weight,
 - iv) where the diameter of the glass beads is at least equal to the thickness of the adhesive film, and
- wherein the adhesive film is in the form of a punched film section.
15. A method for implanting electrical modules in a card body provided with a cutout for accommodating an electronic module which on a first side has a plurality of contact surfaces and on a second side, which is opposite the first side, has an IC chip whose terminals are connected via electrical conductors to the contact surfaces, wherein an electrically conductive, thermoplastic and heat-activatable adhesive film, comprising
- i) a thermoplastic polymer in a proportion of from 30 to 89.9% by weight,
 - ii)
 - a) one or more tackifying resins in a proportion of from 5 to 50% by weight or
 - b) epoxy resins with hardeners, with or without accelerators, in a

proportion of from 5 to 40% by weight, or

- c) both said one or more tackifying resins in a proportion of from 5 to 50% by weight and said epoxy resins with hardeners, with or without accelerators, in a proportion of from 5 to 40% by weight,

and

- iii) silver-coated glass beads in a proportion of from 0.1 to 40% by weight,
- iv) where the diameter of the glass beads is at least equal to the thickness of the adhesive film is used to connect the second side of the module to the card body.

- 17. The adhesive film of claim 11, wherein said additives are selected from the group consisting of colorants and mineral or organic fillers.
- 18. The adhesive film of claim 17, wherein said additives are selected from the group consisting of silica, carbon powders, and metal powder.
- 19. The adhesive film of claim 13, wherein said temperatures are from 80°C to 100°C.
- 20. The adhesive film of claim 10, wherein said modified rubbers are nitrile rubbers.